

# ABSTRACT

A system for bidirectional communication of digital data between a central unit and a remote unit wherein the need for tracking loops in the central unit has been eliminated. The central unit transmitter generates a master carrier and a master clock signal which are used to transmit downstream data to the remote units. The remote units recover the master carrier and master clock and synchronize local oscillators in each remote unit to these master carrier and master clock signals to generate reference carrier and clock signals for use by the remote unit receiver. These reference carrier and clock signals are also used by the remote unit transmitters to transmit upstream data to the central unit. The central unit receiver detects the phase difference between the reference carrier and clock signals from the remote units periodically and adjusts the phase of the master carrier and master clock signals for use by the central unit receiver to receive the upstream data.

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